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L3 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:725629 HCAPLUS

DOCUMENT NUMBER: 140:123019

TITLE: Anabolic and catabolic bone effects of human parathyroid hormone (1-34) are predicted by duration of hormone exposure

AUTHOR(S): Frolik, Charles A.; Black, Elwood C.; Cain, Ricky L.; Satterwhite, Julie H.; Brown-Augsburger, Patricia L.; Sato, Masahiko; Hock, Janet M.

CORPORATE SOURCE: Lilly Research Laboratories Lilly Corporate Center, Eli Lilly and Company, Indianapolis, IN, 46285, USA

SOURCE: Bone (San Diego, CA, United States) (2003), 33(3), 372-379

CODEN: BONEDL; ISSN: 8756-3282

PUBLISHER: Elsevier Science

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Parathyroid hormone (PTH) (1-34), given once daily, increases bone mass in a variety of animal models and humans with osteoporosis. However, continuous PTH infusion has been shown to cause bone loss. To determine the pharmacokinetic profile of PTH(1-34) associated with anabolic and catabolic bone responses, PTH(1-34) pharmacokinetic and serum biochem. profiles were evaluated in young male rats using dosing regimens that resulted in either gain or loss of bone mass. Once-daily PTH(1-34) or 6 PTH(1-34) injections within 1 h, for a total daily dose of 80 µg/kg, induced equivalent increases in proximal tibia bone mass. In contrast, 6 PTH(1-34) injections/day over 6 h for a total dose of 80 µg/kg/day or 3 injections/day over 8 h for a total of 240 µg/kg/day decreased tibia bone mass. The PTH(1-34) pharmacokinetics of the different treatment regimens were distinctive. The magnitude of the maximum serum concns. (Cmax) of PTH(1-34) and area under the curve (AUC) did not predict the catabolic bone outcome. Compared to the anabolic pharmacokinetic profile of a transient increase in PTH(1-34) with rapid decreases in serum calcium and phosphate, the catabolic regimen was associated with PTH(1-34) concns. remaining above baseline values during the entire 6-h dosing period with a trend toward an increase in serum calcium and a prolonged decrease in phosphate. The pharmacokinetic profiles suggest that the anabolic or catabolic response of bone to PTH(1-34) is determined primarily by the length of time each day that serum concns. of PTH(1-34) remain above baseline levels of endogenous PTH and only secondarily by the Cmax or AUC of PTH(1-34) achieved.

CC 2-7 (Mammalian Hormones)

ST parathormone fragment anabolic catabolic bone hormone exposure

IT Bone

Bone formation

(anabolic and catabolic bone effects of parathyroid hormone prediction by duration of hormone exposure)

IT Mineral elements, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study) (bone; anabolic and catabolic bone effects of parathyroid hormone prediction by duration of hormone exposure)

IT Bone

(minerals; anabolic and catabolic bone effects of parathyroid hormone prediction by duration of hormone exposure)

IT Bone

(resorption; anabolic and catabolic bone effects of parathyroid hormone prediction by duration of hormone exposure)

IT Bone

(tibia; anabolic and catabolic bone effects of parathyroid hormone prediction by duration of hormone exposure)
 IT 7440-70-2, Calcium, biological studies 52232-67-4, Human parathyroid hormone(1-34)
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (anabolic and catabolic bone effects of parathyroid hormone prediction by duration of hormone exposure)
 IT 14265-44-2, Phosphate, biological studies
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (inorg.; anabolic and catabolic bone effects of parathyroid hormone prediction by duration of hormone exposure)
 REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2001:229143 HCAPLUS
 DOCUMENT NUMBER: 134:232284
 TITLE: Method for monitoring treatment with a parathyroid hormone
 INVENTOR(S): Hock, Janet M.; Satterwhite, Julie
 PATENT ASSIGNEE(S): Eli Lilly and Company, USA
 SOURCE: PCT Int. Appl., 135 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001022093	A1	20010329	WO 2000-US24745	20000911
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2387693	AA	20010329	CA 2000-2387693	20000911
EP 1222465	A1	20020717	EP 2000-961713	20000911
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
PRIORITY APPLN. INFO.:				
			US 1999-154879P	P 19990920
			US 1999-156803P	P 19990930
			US 2000-196370P	P 20000412
			WO 2000-US24745	W 20000911

AB The present invention relates to a method for monitoring effects of administration of a parathyroid hormone by determining levels of one or more markers of an activity of this hormone. Suitable markers of bone formation include one or more enzymes indicative of osteoblastic processes of bone formation, preferably bone specific alkaline phosphatase, and/or one or more products of collagen biosynthesis, preferably a procollagen I C-terminal propeptide. Suitable markers of bone resorption and turnover include one or more products of collagen degradation, preferably an N-terminal telopeptide (NTX). In addition, methods for concurrently reducing the risk of both vertebral and non-vertebral bone fracture in a male human subject at risk of or having osteoporosis are also disclosed, involving

administration of human parathyroid hormone (amino acid sequence 1-34) without concurrent administration of an antiresorptive agent other than vitamin D or calcium. A kit for monitoring an effect of administration of parathyroid hormone to subject is claimed, as is an article of manufacture comprising packaging material and a pharmaceutical composition comprising human PTH (1-34) is also claimed.

- IC ICM G01N033-68
- ICS A61K038-29; A61P019-10; C12Q001-42
- CC 2-1 (Mammalian Hormones)
- ST parathyroid hormone therapy osteoporosis monitoring method
- IT Collagens, analysis
 - RL: ANT (Analyte); ANST (Analytical study)
 - (N-terminal telopeptide; method for monitoring osteoporosis treatment with a parathyroid hormone by determining markers of hormone activity)
- IT Bone, disease
 - (fracture; method for treating male subjects at risk for bone fractures using parathyroid hormone)
- IT Reproductive tract
 - (hypogonadism; method for treating male subjects at risk for bone fractures resulting from a hypogonadal condition using parathyroid hormone)
- IT Bone formation
 - Osteoporosis
 - Urine analysis
 - (method for monitoring osteoporosis treatment with a parathyroid hormone by determining markers of hormone activity)
- IT Aging, animal
 - Sex
 - (method for monitoring osteoporosis treatment with a parathyroid hormone by determining markers of hormone activity adjusted for age and gender)
- IT Hormone replacement therapy
 - (method for monitoring osteoporosis treatment with a parathyroid hormone in the presence of hormone replacement therapy or therapy with an antiresorptive agent)
- IT Collagens, analysis
 - RL: ANT (Analyte); ANST (Analytical study)
 - (procollagens, type I, C-terminal propeptide; method for monitoring osteoporosis treatment with a parathyroid hormone by determining markers of hormone activity)
- IT Collagens, analysis
 - RL: ANT (Analyte); ANST (Analytical study)
 - (products of collagen biosynthesis or degradation; method for monitoring osteoporosis treatment with a parathyroid hormone by determining markers of hormone activity)
- IT Bone
 - (resorption, inhibitors; method for monitoring osteoporosis treatment with a parathyroid hormone in the presence of hormone replacement therapy or therapy with an antiresorptive agent)
- IT Spinal column
 - (vertebra, fracture; method for treating male subjects at risk for bone fractures using parathyroid hormone)
- IT 9001-78-9 83462-55-9, Deoxyypyridinoline
 - RL: ANT (Analyte); ANST (Analytical study)
 - (method for monitoring osteoporosis treatment with a parathyroid hormone by determining markers of hormone activity)
- IT 9002-64-6, Parathyroid hormone 52232-67-4, Human parathyroid hormone(1-34)
 - RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

(Uses)

(method for monitoring osteoporosis treatment with a parathyroid hormone by determining markers of hormone activity)

IT 129318-43-0, Fosamax

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(method for monitoring osteoporosis treatment with a parathyroid hormone in the presence of hormone replacement therapy or therapy with an antiresorptive agent)

REFERENCE COUNT:

8

THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT